

- 27 -

ABSTRACT

A liquid crystal display panel 1, to which an external horizontal drive circuit is connected in a TAB, COG, or other form, capable of performing aging by a substrate alone when image display is possible by connecting the external drive circuit, comprising an active matrix display area 2, a vertical drive circuit 4, and a horizontal aging circuit 5 for supplying signals to a plurality of source lines at one time provided on a substrate 3.

Also, a medium- to small-sized active matrix type liquid crystal display apparatus used for a PDA etc. able to be produced at a high quality and a low cost without using a time sharing driving method and provided with a horizontal drive circuit as an external circuit, wherein a vertical drive circuit is formed integrally with a liquid crystal display area on a glass substrate by using low temperature PolySi TFTs, a horizontal drive circuit is connected to a liquid crystal display panel substrate by COG, and output terminals of a driver IC constituting the horizontal drive circuit and source lines Ls are in a one-to-one correspondence.